KARNATAKA TEST HOUSE PVT LTD.

MATERIAL TESTING LABORATORY

NABL Accredited Laboratory as per ISO/IEC 17025

Report No. : KTH/C.AGG/2179-3704/2013-2014 Date: 13.01.2014

TEST REPORT ON AGGREGATE
(Coarse Aggregate)

Name of the Customer* : **The Assistant Executive Engineer,**
Yelahanka Sub Division,
BBMP, Bangalore - 64.

Name of the Project* : Construction of Low cost houses to poor SC/ST People in Nagenahalli, Harohalli and I P Colony in Ward No-02 of Yelahanka Sub Division.

Name of Contractor* : M/s Project Manager, Nirmithi Kendra (Urban), Bangalore.

Source of Sample : Supplied by the Customer.

Sample Received on : 08.01.2014.

Technical Reference : IS : 2386 Part I to VIII– 1963 (Reaffirmed-2002), IS : 383 – 1970.

Sieve Analysis of Coarse Aggregate - 40mm & down size

Sl. No.	Sieve size mm	% Passing	IS : 383-1970 Stipulations		Remarks
			Single Size	Graded Size	
1	60	100	100	100	Sample does not confirms to Single Size for IS: Stipulation of 40mm size Aggregate
2	40	50.4	85 to 100	95 to 100	
3	20	0.4	0 to 20	30 to 70	
4	12.5	-	0 to 20	-	
5	10	-	0 to 5	10 to 35	
6	4.75	-	-	0 to 5	

Sl. No.	Test Conducted	Identification mm	Results	IS : 383 – 1970 Stipulations
1	Flakiness Index (%)	40	17.4	Not specified
2	Elongation Index (%)	40	18.7	Not specified
3	Impact Value (%)	40	23.68	Shall not be more than 45% for Concrete and 30% for Wearing surfaces, such as runways, roads and pavements.

* As furnished by the Customer

For KARNATAKA TEST HOUSE PVT. LTD.

(SREENIVASA.C.)
TECHNICAL MANAGER

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Report No. : KTH/C.AGG/2179-3704a/2013-2014 Date: 13.01.2014

TEST REPORT ON AGGREGATE
(Coarse Aggregate)

Name of the Customer*	:	The Assistant Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore - 64.
Name of the Project*	:	Construction of Low cost houses to poor SC/ST People in Nagenahalli, Harohalli and J P Colony in Ward No-02 of Yelahanka Sub Division.
Name of Contractor*	:	M/s Project Manager, Nirmithi Kendra (Urban), Bangalore.
Source of Sample	:	Supplied by the Customer.
Sample Received on	:	08.01.2014.
Technical Reference	:	IS : 2386 Part I to VIII – 1963 (Reaffirmed-2002), IS : 383 – 1970.

Sieve Analysis of Coarse Aggregate - 20mm

Sl. No.	Sieve size mm	% Passing	IS : 383-1970 Stipulations		Remarks
			Single Size	Graded Size	
1	40	100	100	100	Sample confirms to Single Size of IS: Stipulation for 20mm size Aggregate Fails for Graded Stipulation
2	20	85.1	85 to 100	95 to 100	
3	16	33.2	-	-	
4	10	1.3	0 to 20	25 to 55	
5	4.75	-	0 to 5	0 to 10	

Sl. No.	Test Conducted	Identification mm	Results %	IS : 383 – 1970 Stipulations
1	Flakiness Index	20	10.12	Not specified
2	Elongation Index	20	14.54	Not specified
3	Crushing Value	20	24.53	Shall not be more than 45% for Concrete and 30% for Wearing surfaces, such as runways, roads and pavements.

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For KARNATAKA TEST HOUSE PVT. LTD.

(SREENIVASA.C)
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Report No. : KTH/F.AGG/2179-3705/2013-2014 Date: 13.01.2014

TEST REPORT ON AGGREGATE

(Fine Aggregate)

Name of the Customer* : The Assistant Executive Engineer,
Yelahanka Sub Division,
BBMP, Bangalore - 64.

Name of the Project* : Construction of Low cost houses to poor SC/ST People in Nagenahalli, Harohalli and J P Colony in Ward No-02 of Yelahanka Sub Division.

Name of Contractor* : M/s Project Manager, Nirmithi Kendra (Urban), Bangalore.

Source of Sample : Supplied by the Customer.

Sample Received on : 08.01.2014.

Technical Reference : IS : 2386 Part I to VIII– 1963 (Reaffirmed-2002), IS : 383 – 1970.

Sieve Analysis of Fine Aggregate (River Sand)

Sl. No.	Sieve size mm	% Passing	IS : 383 – 1970 Specification				Remarks
			% passing for Zone I	% passing for Zone II	% passing for Zone III	% Passing for Zone IV	
1	10	100	100	100	100	100	Falls in Zone –I as per table 4 of IS-383 – 1970 Suitable for Construction.
2	4.75	93.3	90 – 100	90 – 100	90 – 100	95 - 100	
3	2.36	79.9	60 – 95	75 – 100	85 - 100	95 - 100	
4	1.18	48.9	30 – 70	55 – 90	75 – 100	90 - 100	
5	0.600	30.7	15 – 34	35 – 59	60 – 79	80 - 100	
6	0.300	6.6	5 – 20	8 - 30	12 – 40	15 to 50	
7	0.150	1.5	0 – 10	0 - 10	0 – 10	0 to 15	

Sl. No.	Test Conducted	Results	IS : 383 – 1970 Stipulations
1.	Materials finer than 75 microns (%) (Deleterious Material)	1.60	Shall not be more than 15.0 %

* As furnished by the Customer

For KARNATAKA TEST HOUSE PVT. LTD.

(SREENIVASA.C)
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Report No. : KTH/ CEMENT/2179-3706/2013-2014 **Date: 17.01.2014**

PHYSICAL TEST REPORT ON CEMENT

Interim 3 & 7 days

Name of the Customer*	:	The Assistant Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore - 64.
Name of the Project*	:	Construction of 1 pw cast houses to poor SC/ST People in Nagenahalli, Harohalli and J P Colony in Ward No-02 of Yelahanka Sub Division.
Name of Contractor*	:	M/s Project Manager, Nirmithi Kendra (Urban), Bangalore.
Source of Sample	:	Supplied by the Customer.
Type of Cement*	:	Ordinary Portland cement (OPC)
Brand of Cement*	:	Birla Super 53 Grade.
Sample Received on	:	08.01.2014.
Period of Test	:	09.01.2014 to 16.01.2014.
Technical Reference	:	IS: 4031(Part I–VI) 1988 (Reaffirmed–2000) & IS : 8112-1989

Sl. No.	Test Conducted	Results	IS: 8112-1989 Stipulation	Remarks
1	Normal consistency	29.25%	Not specified	-
2	Initial setting time	136 minutes	Shall not be less than 30 minutes	P
3	Final setting time	238 minutes	Shall not be more than 600 minutes	P
4	Compressive strength (Average of three results) a. 72−1h (3 days) b. 168+2h (7 days) c. 672+4h (28 days)	 24.54 MPa 35.15 MPa T.T.C	 Shall not be less than 22.0 MPa Shall not be less than 33.0 MPa Shall not be less than 43.0 MPa	 P P -
5	Fineness (By Blaine's air permeability method)	272.14 m^2/kg	Shall not be less than 225m^2/kg	P
6	Soundness (Le-chatlier's method)	1.01 mm	Shall not be more than 10 mm	P

P: Passes IS requirement F: Fails IS requirement T.T.C: Test To be Conducted.

*As furnished by the Customer

For KARNATAKA TEST HOUSE PVT. LTD.

(SREENIVASA.C)
TECHNICAL MANAGER

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Report No. : KTH/ST/2179-3707/2013-2014 **Date: 13.01.2014**

TEST REPORT ON STEEL BARS

Name of the Customer* : **The Assistant Executive Engineer,**
Yelahanka Sub Divisinn,
BBMP, Bangalore - 64.

Name of the Project* : Construction of Low cost houses to poor SC/ST People in Nagenahalli, Havohalli and J P Colony in Ward No-02 of Yelahanka Sub Division.

Name of Contractor* : M/s Project Manager, Nirmithi Kendra (Urban), Bangalore.

Source of Sample : Supplied by the Customer.

Sample Received on : 08.01.2014.

Nature of Sample* : Reinforcement steel – 8mm, 10mm &12mm.

Technical Reference : Tensile IS: 1786 – 2008 & IS: 1608–1995 (Reaffirmed–2000)
Bend & Re-bend IS: 1786 – 2008 & IS: 1599 - 1985 (Reaffirmed–2000).

Grade of Steel* : Fe-415.

TENSILE TEST:

Dia (mm)	8	10	12	Limits as per IS : 1786-2008. Gr. Fe 415
Weight / unit length (kg/m)	0.386	0.597	0.846	8mm – 0.367 Min 10mm – 0.574 Min 12mm – 0.844 Min
0.2% proof Stress (N/mm^2)	437.90	624.20	477.71	415 Min
Tensile Strength (N/mm^2)	497.61	675.16	539.63	10% More than actual 0.2% proof stress but not less than 485 N/mm^2
% Elongation (on 5.65 √A.G.L)	25.0	23.0	20.0	14.5 Min.

BEND TEST:

Sl. No.	Dia (mm)	Mandrel diameter	Observations
1.	8	4 dia	No cracks observed. Passes the test.
2.	10	4 dia	No cracks observed. Passes the test.
3.	12	4 dia	No cracks observed. Passes the test.

REBEND TEST:

Sl. No.	Dia (mm)	Mandrel diameter	Observations
1.	8	5 dia	No cracks observed. Passes the test
2.	10	5 dia	No cracks observed. Passes the test.
3.	12	7 dia	No cracks observed. Passes the test.

* As furnished by the Customer

For KARNATAKA TEST HOUSE PVT. LTD.

(SREENIVASA.C)
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Report No. : KTH/B/2179-3708/2013-2014 **Date: 13.01.2014**

TEST REPORT ON COMMON BURNT CLAY BRICKS.

Name of the Customer*	:	The Assistant Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore - 64.
Name of the Project*	:	Construction of Low cost houses to poor SC/ST People in Nagenahalli, Harohalli and J P Colony in Ward No-02 of Yelahanka Sub Division.
Name of Contractor*	:	M/s Project Manager, Nirmithi Kendra (Urban), Bangalore.
Source of Sample	:	Supplied by the Customer.
Sample Received on	:	08.01.2014.
Name of the Brand & Nos.*	:	CBW, 10 Nos.
Technical Reference	:	IS: 3495 (Part I-IV) 1992 (Reaffirmed – 2002) IS: 1077 – 1992 (Reaffirmed – 1997)

WATER ABSORPTION TEST

Sl. No.	Brand	Water Absorption % by Wt. Individual	Avg. %	Remarks
1	CBW	12.16	11.94	Sample conforms to clause 7.2 of IS: 1077 – 1992
2	CBW	11.78		
3	CBW	11.90		
4	CBW	10.02		
5	CBW	9.66		

COMPRESSIVE STRENGTH

Sl. No.	Brand	Measured Dimensions (mm) L x B x D	Loaded area mm^2 L x B	Max. Load KN	Compressive Strength N/mm^2	Avg. N/mm^2	Remarks
1	CBW	220 x 101 x 74	22220	33	1.49	3.24	Sample does not satisfy the minimum Class 3.5 Designation As per Table 1 of IS: 1077 - 1992
2	CBW	222 x 103 x 72	22866	138	6.04		
3	CBW	222 x 102 x 74	22644	71	3.14		
4	CBW	223 x 102 x 74	22746	43	1.89		
5	CBW	222 x 103 x 73	22866	84	3.67		

*As furnished by the Customer.

For KARNATAKA TEST HOUSE PVT. LTD.

(SREENIVASA.C)
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Report No. : KTH/CT/2181-3710/2013-2014 **Date: 09.01.2014**

TEST REPORT ON CONCRETE CUBES

To,

The Assistant Executive Engineer,
Yelahanka Sub Division,
BBMP, Bangalore – 64.

Name of Project* : Construction of Low cost houses to poor SC/ST People in Nagenahalli, Harohalli and J P Colony in Ward No-02 of Yelahanka Sub Division.

Name of Contractor* : M/s Project Manager, Nirmithi Kendra (Urban), Bangalore.

Sample Received on : 08.01.2014.

Compressive strength test as per IS: 516-1959 (Reaffirmed 1999) has been conducted on the concrete cube specimens, supplied by the Customer and the results are tabulated here below.

Dimension of Specimen: 150mmx150mmx150mm

Sl. No	Cubes pertaining to the concrete cast at*(Details of structural member identification)	Grade of Concrete*	Date of casting*	Date of Testing	Age of Concrete on the date of test**	Contact area (mm^2)	Weight of Specimen (Kg)	Load in KN	Compressive Strength in N/mm^2
1.	Plinth Beam	M_{15}	05.12.2013	08.01.2014	Above 28 days	22500	7.850	462	20.53
2.		"	"	"	"	"	7.790	404	17.95
3.		"	"	"	"	"	8.020	477	21.20

1 N/Sq.mm = 10Kg/Sq.cm.(Approx.)
*As Furnished by the Customer
**Based on the data furnished by the Customer
Note: A minimum of three cube specimens shall be supplied for testing as per IS:516-1959.

AEE

KARNATAKA TEST HOUSE PVT. LTD. BANGALORE-54

for KARNATAKA TEST HOUSE PVT. LTD.

(SREENIVASA.C.)
TECHNICAL MANAGER

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Report No. : KTH/CT/2181-3710a/2013-2014 **Date: 09.01.2014**

TEST REPORT ON CONCRETE CUBES

To,

The Assistant Executive Engineer,
Yelahanka Sub Division,
BBMP, Bangalore – 64..

Name of Project* : Construction of Low cost houses to poor SC/ST People in Nagenahalli, Harohalli and J P Colony in Ward No-02 of Yelahanka Sub Division.

Name of Contractor* : M/s Project Manager, Nirmithi Kendra (Urban), Bangalore.

Sample Received on : 08.01.2014.

Compressive Strength test as per IS: 516-1959 (Reaffirmed 1999) has been conducted on the concrete cube specimens, supplied by the Customer and the results are tabulated here below:

Dimension of Specimen: 150mmx150mmx150mm

Sl. No	Cubes pertaining to the concrete cast at*(Details of structural member identification)	Grade of Concrete*	Date of casting*	Date of Testing	Age of Concrete on the date of test**	Contact area (mm^2)	Weight of Specimen (Kg)	Load in KN	Compressive Strength in N/mm^2
1.	Ground Floor Roof Slab	M_{20}	25.12.2013	08.01.2014	14 days	22500	7.950	650	28.89
2.	"	"	"	"	"	"	7.730	600	26.67
3.	"	"	"	"	"	"	7.880	610	27.11

1 N/Sq.mm = 10Kg/Sq.cm.(Approx.)
*As Furnished by the Customer
**Based on the data furnished by the Customer
Note: A minimum of three cube specimens shall be supplied for testing as per IS:516-1959.

AEE

KARNATAKA TEST HOUSE PVT. LTD. BANGALORE-54

for KARNATAKA TEST HOUSE PVT. LTD.

(SREENIVASA.C.)
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